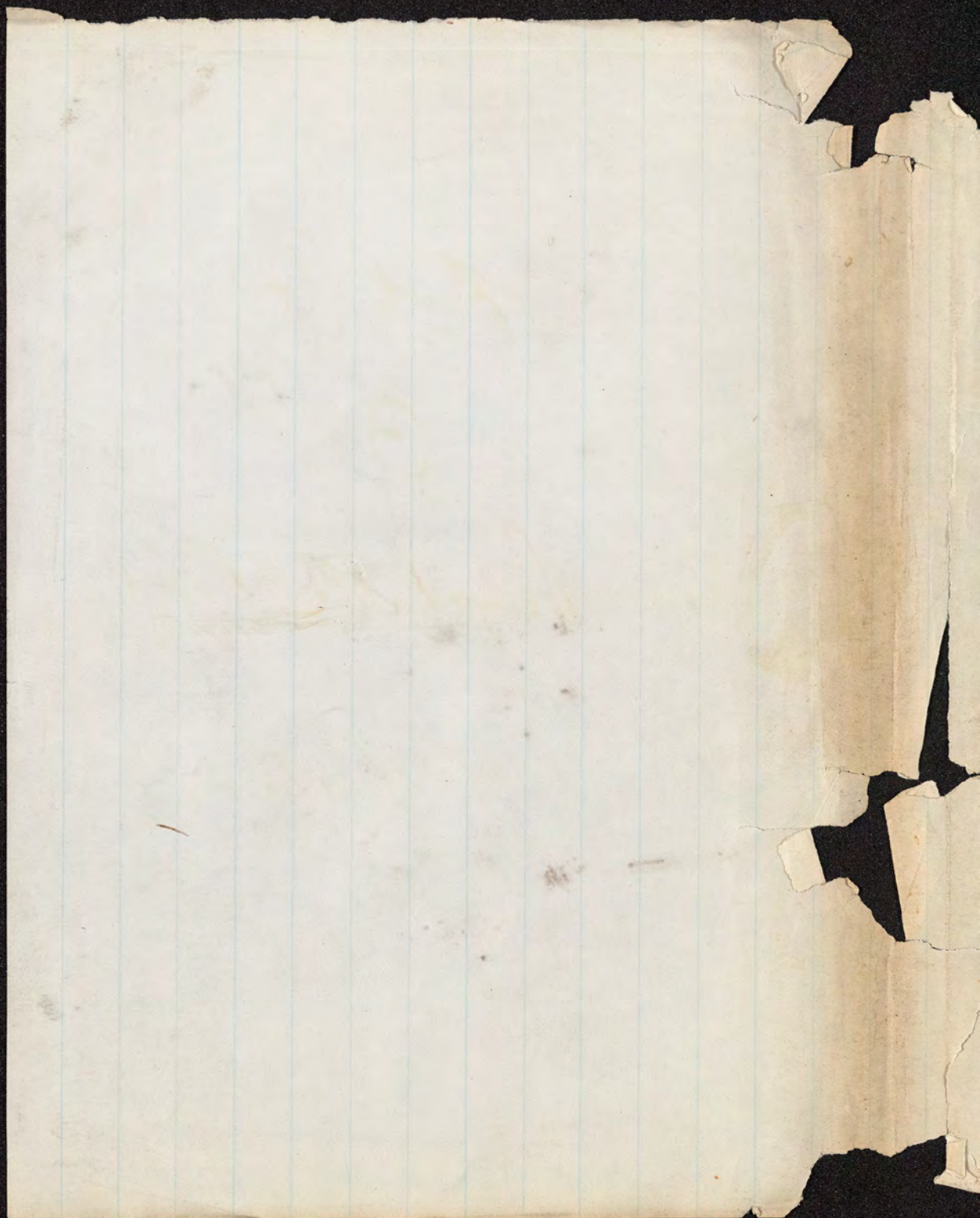




Food &

~

Milk

Meats

Soups &c.

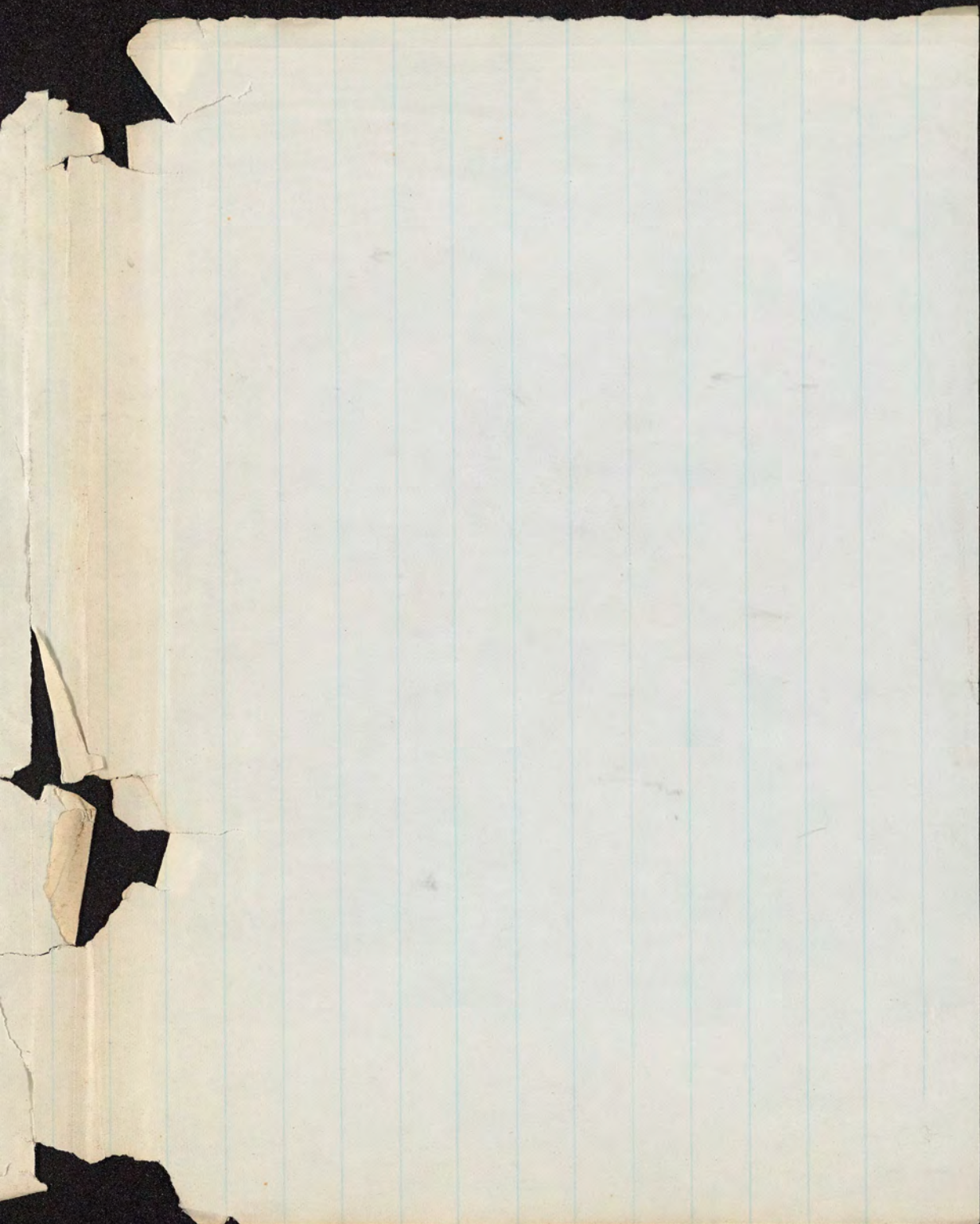


( Sago from

Several trees; especially

Sago Palm - Sagus Rumphii -

&  
Cycas Revoluta, - )





End of 2<sup>nd</sup> Lecture  
on Alimintation  
1875

Dr. HAMMOND

Dr. Hammond tried to live on it for two or three days; but he soon had to <sup>stop</sup> ~~stop~~ <sup>Gummi of the purges</sup> ~~stop~~ <sup>babes</sup>.

CELLULOSE  
LIGNIN &  
SCHLEROGEN

(Cellulose, Lignin, and Schlerogen, require a few words. In times of famine <sup>in Europe</sup> the wood of the beech tree has been ground and baked. The reason wood is not used as food is that it <sup>is</sup> ~~has~~ <sup>of pipes</sup> mechanical <sup>resistance</sup> ~~opponents~~ to digestion. <sup>An Elongated mill chewing and small sticks of wood.</sup> The utility of these hard materials in vegetables is to stimulate the alimentary canal, thus bran bread promotes peristaltic contraction. 

WOOD EATEN  
AS FOOD.

COMPOUND  
SUBSTANCES

MILK.

A PERFECT  
FOOD.

CASEIN.  
BUTYRIN.  
LACTIN.

SALINE AND  
ACIDULOUS  
SUBSTANCES.

Passing from these proximate principles we next take up the compound substances <sup>which constitute our food</sup>. The first, alimentary substance is milk. This is a model food given by nature. Much is gained by studying it. It <sup>illustrates</sup> ~~shows~~ the necessity of the three representative kinds of food, viz: nitrogenous, oleaginous and amylaceous. It has casein, a nitrogenous principle; butyrin, an oleaginous; and lactin, an amylaceous one. It is not perfect without them all. Cream is not as nourishing as <sup>the whole</sup> ~~whole~~ <sup>or even as</sup> milk. Milk has also saline substances, and acidulous.



Space of 2 pages  
for this

back

\* Partin Partic and in apples, pears, quinces,  
berries, cherries, oranges, tomatoes, onions, carrots,  
beets, turnips.

Filter after (first) evap., & weigh residue. = Water.  
Filter after decanting resid. of soap, in ether, leave Sugar.  
Filter after adding water to surplus on filter, leave Salt.  
Burn that surplus - loss = Casesin.

Butter = residue of  
etheral solution,  
after evaporation.  
Ashes got by burning  
surplus on filter after  
washing surplus from  
etheral solution, +  
ashes from burning sugar  
residuum for aspr of  
water solution = Salts.

whole minus solid left on evaporation, = Water.  
Portion dissolved from solid by ether, = Butter;  
except that left on filter, etheral solution;  
this yields to water, after filtering again, - Sugar;  
Only some ashes are left on burning this.  
Burning the first surplus from etheral solution,  
leaves ashes whose weight taken from whole surplus, Casesin.

1. Weigh.
2. Coagulate, with acetic acid, & few drops of Milk.
3. Evaporate, on sand or water bath.
4. Weigh residue, by weight  
Subtract from whole weight,  
to determine the water.
5. Dry solid residuum in ether, for fat.
6. Heat, filter & evap. this solution.
7. Weigh the butter left.
8. Wash surplus left on filter from  
etheral solution, with water.
9. Filter again, keeping the surplus on filter.
10. Evap. the watery solution made.
11. Dry & weigh its product (Sugary).
12. Burn the same product.
13. Weigh its ashes.
14. Subtract their weight from the  
whole Sugary product, to get the amt. of Sugar.
15. Burn the surplus left on the  
filter from the solution of protein  
in water.
16. Weigh its ashes; deduct their weight  
from weight of the surplus, for  
amount of Casesin.
17. Add weight of both ashes, for  
amount of mineral salts.



Additional to

Principles

61

ACIDS

PECTIC  
ACID

COMMON  
SALT

EXPERIMENT  
ON  
CATFEE

PHOSPHATE  
AND  
CARBONATE  
OF  
LIME.

CARB. OF  
POTASSA.

CHLORIDE OF  
POTASSIUM

BROMIDES  
&  
IODIDES.

IRON.

The saline and acidulous parts are separate from the others. There is no doubt that the acids of fruits, as vinegar, or acetic, citric, tartaric, &c. all contribute something for food. Fruits, & little of a jelly-making substance <sup>pectin</sup>.

Milk also contains pectic acid, the same composition as pectin (or gelatin without nitrogen). It also contains chloride of sodium, or common salt, which is necessary to life. This latter fact was proved by an experiment on oxen. A number were fed with salt and others were not. Those which had none soon got lean and weak. The blood contains salt.

Chlorine is necessary to the gastric juice. Milk contains phosphate and carbonate of ~~lime~~, which make bones. It also contains carbonate of potassium, chloride of potassium, <sup>& Sodium</sup> (iodides and bromides) which occur in the blood.

It has also iron in it. It is therefore a perfect representative of all the kinds of food. <sup>Em. a little pectic acid, & when turning sour, lactic acid.</sup>

Milk is easily digested by all,

essential



End 4<sup>th</sup> Lecture, 1870

2.

Deteriorations of Milk.

1. Stalling of Cattle.
2. Bad feeding of ditto.
3. Unhealthy selection of ditto.
4. Staleness of milk.
5. Removal of cream.
6. Adding of water.
7. Other possible adulterations.

Signs of Deterioration.

1. Smell and Taste & Curdling.
2. Lactometer.
3. Hydrometer.

End of 4<sup>th</sup> Lecture, 1867

Shew Lactometer &  
Hydrometer in use -  
& fresh beef tea.

1868  
1869.

Changes of Milk:

1. Cream rises.
2. Casein begins to decompose.
3. Lactin splits into Lactic acid.
4. Thin curd, the casein.
5. Soured fully & spoils.

A fungous vegetation  
very minute forms  
in it.

1 quart water & 4 quarts milk  
1 qt. 1 quart water



†

Parkes says

N. Y. Brandy Health  
(Pop. Sci. Month),  
May, 1875

most authors say  
good milk less than an  
S. J. Ashurst

has fixed 1029 as the  
minimum spec. gravity  
for good unwatered milk.

I find Durham  
reddened litm  
h one other Dur  
turning was slight  
meigs found m  
Parkes says

A German chemist found  
in milk of 124 cows, the  
minimum 1029.5, max-  
imum 1034.3, mean 1031.7.

(Tagilblue, 69 Tullach,  
N. Y., lactom. i.e. spec.  
grav. tube, \$1.25)

Meigs says

will give 30

The Maison Rustique, good agricultural authority,

says good cows well kept, 15 per ct.

10 safe to say.

<sup>a little over</sup>

1 pint in 26 hrs for infant in first 10 days

up to 2<sup>nd</sup> month 1 1/2 pint to a quart

2<sup>nd</sup> & 3<sup>rd</sup> months a quart to 3 pints —

about 6 ounces at a time at such an age;

later, 8 ounces —

(See Meigs & Pepper p. 304 for Meigs' Food for  
infants — of gelatin, milk, cream & arrowroot

See Meigs & Pepper p. 306 for vermic & Buzard or  
woman's milk —

MILK CAPABILITY  
SUPPORTING  
LIFE.

CURDLING  
MILK  
IN THE STOMACH

OBSTRUCTION  
OF  
THE BOWEL

IMPURITY  
OF  
COMMERCIAL  
MILK.

MISMANAGEMENT  
OF  
COWS.

or neutral;  
I tested some  
as perceptibly acid  
to litmus paper  
milk for

in all it  
was distinctly.

and also

Lactation.  
& 1 fourth acid  
cent (meigs  
p. 306)  
Edmercy cows



End 4<sup>th</sup> Lecture, 1870

2.

### Deteriorations of Milk.

1. Stalling of Cattle.
2. Bad feeding of ditto.
3. Unhealthy selection of ditto.
4. Staleness of milk.
5. Removal of cream.
6. Adding of water.
7. Other possible adulterations.

### Signs of Deterioration.

1. Smell and Taste, & Curdling.
2. Lactometer.
3. Hydrometer.

End of 4<sup>th</sup> Lecture, 1867

Show lactometer &  
hydrometer in use -  
& fresh beef tea.

1868  
1869.



7

Parkes says cows milk <sup>partly</sup> acid or neutral;

most authors say alkaline. In 1872 I tested some good milk less than an hour from the cow, with litmus & turmeric; it was perceptibly acid to litmus paper.

Dr. J. Achurst of Phila. tested fresh milk from 9 fine Durham & Alderney cows — in all it reddened litmus paper — more or less distinctly.

In one other Durham cow litmus was reddened & also turmeric was slightly changed; at end of long lactation. Meigs found milk of 42 women neutral (pink) & 1 faintly acid. Parkes says cream 4 to 6 per cent (meigs p. 306).

Meigs says (Meigs & Pepper, p. 299) <sup>some</sup> Alderney cows will give 30 to 40 per cent. cream.

The Maison Rustique, good agricultural authority, says good cows will kept, 15 per cent.

10 safe to say.

<sup>a little over</sup> 1 pint in 24 hrs for infant in first 10 days

up to 2<sup>nd</sup> month 1 1/2 pint to a quart

2<sup>nd</sup> & 3<sup>rd</sup> months a quart to 3 pints —

about 6 ounces at a time at such an age;

later, 8 ounces.

(See Meigs & Pepper p. 304 for Meigs' Food for infants — of gelatin, milk, cream & arrowroot  
See Meigs & Pepper p. 306 for venous & arterial or woman's milk —

MILK CAPABLE SUPPORTING LIFE.

CURDLING MILK IN THE STOMACH

OBSTRUCTION OF THE BOWEL

IMPURITY OF COMMERCIAL MILK.

MISMANAGEMENT OF COWS.



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iding.

Good  
Should not have been  
Sent material

102914  
is spec. given  
102914

80  
69.



MILK CAPABLE  
OF  
SUPPORTING  
LIFE.

with few exceptions. (A man, for 20 yrs. lived on bread and milk.) Milk alone will support life if a man does not work <sup>hard</sup>. At all events it is a useful addition to a meal. For breakfast, especially in a hurry.

CURDLING  
OF  
MILK  
IN THE STOMACH.

The first change which milk undergoes in the stomach, is curdling. It is often thought that if a child vomits curdled milk, ~~that~~ it is a sign of indigestion. This is not however the case. But one must not swallow milk too fast in large quantities, or the curd <sup>becomes</sup> become massing and are not easily acted upon by the digestive fluids.

OBSTRUCTION  
OF  
THE BOWELS.

Occasionally milk causes obstruction of the bowels, by its collecting there; but this <sup>Prof. Chapman mentioned, such a case.</sup> occurs seldom. About 1 in 200 find milk to disagree with them.

IMPURITY  
OF  
COMMERCIAL  
MILK.

Milk is a better breakfast drink than either tea or coffee. The great difficulty, however, is to get it pure. It is adulterated in many ways, but the taste or the lactometer will detect it. Milk is also injured by mismanagement of the cows. If they are fed on slop or in the stable, the milk will be poor. All these difficulties have

MISMANAGEMENT  
OF  
COWS.



(Pop. Science  
Review,  
April  
1866)

 Prof. Voelcker of London after many observations, concludes that no matter how much cream it has, good milk is heavier than watered milk; the former 1030 spec. grav. - the latter 1025; because cream, tho lighter than skim milk is heavier than water. Skimmed milk, not below 1029.

10.72 percent solid matters in good milk, of which 2% to 3 percent should be fatty.

(Milk shaken much (as in wagons) will raise less cream - some of the corpuscles being broken by agitation.

Donne's Lactoscope to look through, for transparency. <sup>1 part to 4</sup> New York milk <sup>1869</sup> ~~disappears~~ <sup>see Met. B. of the Report</sup> <sup>Millions of dollars paid.</sup>

 Dr Karell of Russia has introduced the "milk cure"; giving to patients in various chronic diseases 3 or 4 wineglasses daily (at first less) of skimmed milk. He asserts it to be very restorative. No doubt it is; but why not give them something else, too? Dr Donkin has followed Karell with favorable reports. Dr Wm Mitchell finds the milk treatment most useful in chronic gastric disorders. My expectation is that the final conclusion will be, - that only exceptional cases benefit by this as an exclusive treatment.

London milk, only 10 percent fat. Karell.

London milk.



Good milk should raise 8 to 12 parts in 100 (some does 15) of cream, to be obliterated.

LACTOMETRE

To test the purity of milk we get its specific gravity. Milk is to water as 1028 to 1000. The lactometer, a glass tube which sinks to a certain height according to the density of the milk, is used. The more cream, the lighter the milk will be. Milk should contain from 8 to 15 percent of cream, good milk from 10 to 12.

PERCENTAGE OF CREAM.

ADULTERATIONS

Milk is adulterated with chalk, starch, <sup>burned sugar</sup>, <sup>salt</sup>, and the brains of sheep to give it a creamy appearance.

BUTTERMILK AND SKIM MILK.

Buttermilk and skim milk are both ~~valuable~~. They have the nitrogenous principle without the cream. In sickness skim milk is often better than creamy milk. In low fevers, ordinary milk is best. It is generally taken with a stimulant.

LOW FEVERS.

For an infant brought up by hand buttermilk must be fresh. It is often thought that the milk of different cows should not be mixed.

MIXING THE MILK OF DIFFERENT COWS



Condensed milk is now  
made on a large scale  
in Switzerland & is  
rather favorably reported. <sup>66</sup>

\*  
Buffalo's milk used in Tartary -  
Camel's in Arabia, Syria & Egypt -

Swiss Condensed milk the best -



MIXING MILK OF  
YESTERDAY  
AND TO-DAY.

This is at  
least, &  
with to-day  
in making  
added.

DIFFERENT KINDS  
OF MILK.

(Sweetened milk)  
Casein  
Butter  
Sugar of Milk  
Salts  
Water

Total  
Solids

but it the  
yesterday's  
do, however,  
alkali be

| Cow                | Woman             |
|--------------------|-------------------|
| 4.50 <sup>+</sup>  | 1.52              |
| 4.20 <sup>+</sup>  | 3.55              |
| 5.00               | 6.50 <sup>+</sup> |
| 0.68 <sup>x</sup>  | 0.45              |
| 85.62              | 87.98             |
| 100.00             | 100.00            |
| 14.38 <sup>+</sup> | 13.00             |

CONSTITUENTS  
OF BEEF.

### Beef

|                              |                   |
|------------------------------|-------------------|
| Water                        | 73.4              |
| Soluble Albumen and Haematin | 2.25              |
| Insoluble Albuminates        | 15.2              |
| Gelatinates                  | 3.3               |
| Fat                          | 2.87 <sup>+</sup> |
| Extractives                  | 1.38              |
| Kreatin                      | 0.068             |
| Ash                          | 1.6 <sup>+</sup>  |



Condensed Milk  
 chiefly on the "Borden"  
 plan, now (1871)  
 manufacturing in  
 parts of N.Y. State  
 Millions of pounds and  
 for exportation

1 lb Condensed,

= 4 or 5 milk.

has its water drawn off

& Sugar only added

Privately reported quite good  
 used in New York City

Condensed milk is now  
 made on a large scale  
 in Switzerland & is  
 rather favorably reported.

Buffalo  
 \*  
 Camel

Swiss Condensed milk the best -



MIXING MILK OF  
YESTERDAY  
AND TO-DAY.

This is <sup>unnecessary</sup> ~~wrong~~. It does not hurt it the least. It is wrong to mix yesterday's with to-day's milk. Such will do, however, in making bread, if an alkali be added.



### Lecture V. Milk

DIFFERENT KINDS  
OF  
MILK.

(Sweet milk table)

|                         | Cow's.             | Ass.              | Goat.              | Ewe.               | Woman             |
|-------------------------|--------------------|-------------------|--------------------|--------------------|-------------------|
| Casein <del>10.00</del> | 4.48               | 1.82              | 4.02               | 4.50 <sup>+</sup>  | 1.52              |
| Butter                  | 3.13               | 0.11              | 3.32               | 4.20 <sup>+</sup>  | 3.55              |
| Sugar of Milk           | 4.77               | 6.08 <sup>2</sup> | 5.28               | 5.00               | 6.50 <sup>+</sup> |
| Salts                   | 0.60               | 0.34              | 0.58               | 0.68 <sup>x</sup>  | 0.45              |
| Water                   | 87.02              | 91.65             | 86.80              | 85.62              | 87.98             |
| Total                   | 100.00             | 100.00            | 100.00             | 100.00             | 100.00            |
| Solids                  | 12.98 <sup>+</sup> | 8.00              | 13.20 <sup>+</sup> | 14.38 <sup>+</sup> | 13.00             |

CONSTITUENTS  
OF BEEF.

### Beef

|                              |                   |
|------------------------------|-------------------|
| Water                        | 73.4              |
| Soluble Albumen and Haematin | 2.25              |
| Insoluble Albuminates        | 15.2              |
| Gelatinates                  | 3.3               |
| Fat                          | 2.87 <sup>+</sup> |
| Extractives                  | 1.38              |
| Kreatin                      | 0.068             |
| Ash                          | 1.6 <sup>+</sup>  |

(Sweet milk table)



① Dr. S. Roger A. N. York also uses that to dilute cow's milk for infants with water & whey; with farinacea, more. — (N. Y. Med. Record, June 1869)

\* Woman's milk — according to Doyere (Bequinel):

|         |                |                        |
|---------|----------------|------------------------|
| Water   | 873.80         | <del>843.80</del>      |
| Butter  | 38.00          | <del>3.11</del> (5.6)  |
| Casein  | 3.40           | <del>2.80</del> (3.80) |
| albumen | 13.00          | <del>12.5</del>        |
| Sugar   | 70.00          | <del>17.</del>         |
| Salts   | 1.80           | <del>1.80</del>        |
|         | <u>1000.00</u> | <u>1000.00</u>         |

This gives more albumen & less casein than <sup>some</sup> previous analyses — but is accepted by Becquinel as the most accurate. (Butter will not form easily from human milk). With the age of the (infant) — the casein & sugar augment in proportion.



ASHES  
OF BEEF.

Ashes of Beef, 1.6 to 4 per cent.

|                                 |     |
|---------------------------------|-----|
| Chloride of Sodium.....         | 31  |
| " " Potassium.....              | 154 |
| Potassa.....                    | 54  |
| Soda.....                       | 226 |
| Lime.....                       | 51  |
| Magnesia.....                   | 23  |
| Oxide or Phosphate of Iron..... | 11  |
| Phosphoric Acid.....            | 435 |
| Sulphuric Acid.....             | 36  |
| Silica.....                     | 14  |

~~A few words must be said of the different kinds of milk. Woman's milk differs much from the cow's, having only 3 per cent. of cream. Cow's milk requires dilution with ~~water~~ as much water, before it can be given to an infant, to be raised by hand. It requires also sugar, to sweeten it. It is a question of interest, whether or not it is safe to bring infants up by hand. The wet-nurse should be preferred. Although cow's milk will support an infant's life yet it is ~~often~~ hard to get the milk pure, and ~~from other causes~~ as more nearly natural~~

RAISING  
A CHILD  
BY HAND.

Boil well linen to  
prevent acidity



\* Mortality of Nurse-children in France  
 is reported as something so frightful as to have  
 obtained professional and legal investigation  
 to be proposed for legislative interference: "death"  
 "To consign an infant to a nurse is to consign it to death"  
 "legalized infanticide" — Bequerel.  
 In Germany very many ladies do not nurse their own children; but they most  
 commonly have them wet-nursed at home.  
 Inspection both of the nurses & nursed infants, from  
 time to time <sup>has been</sup> insisted on in France. Months of milk, some alteration

Qualities of a good nurse: (See Bouchet & Appended before)

Not more than 25 years old  
 with second child better than first —  
 Good health (no taint, syph. or scrof.)  
 Good temper —  
 Mammary gland, & nipple, well developed  
 Milk good on inspection.

[End of 14<sup>th</sup> Lecture, 1871]

↓  
 Add — Boil with 10 infants  
 with dimbooi: also  
 about starch-fores  
 infants before teething.



the wet-nurse should be preferred, especially in the case of a delicate child. \*

WET-NURSE.

It is indispensable for a wet-nurse to be healthy. <sup>Her</sup> Sickness, even cancer does not always injure the milk. End of 5<sup>th</sup> Lecture 1873.

As to the transmissibility of constitutional diseases, it is probable that they are not <sup>transmitted</sup> ~~so~~ unless in themselves contagious. But, as <sup>sexual</sup> medicines <sup>when</sup> given to the mother act on the infant, we cannot deny that diseases may also. Syphilis?

Temporary injury to the milk of a nurse is sometimes caused by violent emotions; as an agony of grief, anger &c. They poison the milk. Case; Soldier's infant.

As to the propriety of suckling a child, <sup>menstruation</sup> during pregnancy, it may be remarked that the case is similar to that of suckling twins. Both can be accomplished if the mother is vigorous and takes enough food, & water: not much alcohol.

Feeble women should not suckle infants. A certain woman <sup>under my care</sup> was nearly made consumptive by it. Besides the

TRANSMISSIBILITY OF CONSTITUTIONAL DISEASES. 2  
woman all her children are ill.  
EFFECT OF VIOLENT EMOTIONS ON THE MILK.  
SUCKLING AN INFANT DURING PREGNANCY.

Feeble women.



# End of 20<sup>th</sup> Lecture, 1872.

Indians & Quakers nurse their children 2 or 3 years.  
(H. H. Hender.)

Woman's milk, Dojere:

it is well  
to let early accustom to part feeding  
to be ready for weaning  
when needed

Copy

End of 20<sup>th</sup> Lecture  
Alimentation, 1875.  
Condensed  
Milk



MORTALITY  
OF  
FOUNDLING  
HOSPITALS.

MILK OF ASS.  
COW.  
EWE.  
GOAT.  
BUFFALO

BUFFALO BUTTER.

EGGS.

[and to  
(any of the foregoing) milk]

pleasome  
healthy  
for a  
d herself.  
adling  
raising is  
ung in  
tree years  
ut their  
are young  
ch woman  
s it most  
r. C. West  
milk &

comes from the goat and buffalo.  
In Tartary a kind of beer is  
made of ~~beard~~ milk. In Egypt, where  
the buffalo is used as a beast of bur-  
den, its milk is used and a white  
nearly tasteless butter is made from it.

Passing ~~after~~ milk we come to  
Eggs. We eat the eggs of any accessible  
bird and even of ~~some~~ reptiles. They  
are very nourishing. They have much  
wholesome when fresh.



# Feeding of Infants.

[Space of 3 pages for this]

Always the mother if possible.

every 2 hrs by day & 3 by night in the 1st mo.

gradually getting down, with 3 at 4 mo's, to

every 3 hrs by day & 4 or 5 at night.

No need to wear wholly under (for 2 1/2 yrs)

Indian Squares —

But accustom to bottle from 6 mo's at night —

wean either after teething is over or between spells.

Menstruation : — Pregnancy.  
(twins)

Nest to mother, wet-nurse : — with 2<sup>nd</sup> child best — 2 or 3 years.

healthy; A good-tempered; — temperate —

Can disease be transmitted? Medicines can  
sometimes — yet doubtful.

If fed — chances a good deal less. (French — foundings & nurslings)

Bottle always. — Cow's or goat's or ass's milk —  
a little sugar & little or no water — barley water — oatmeal

If appetite flag — vary — arrowroot — beef — tea —  
Barley — eliminate if diarrhoea. children's milk — when needed

Copy

Condensed Milk

End of 3d lecture on Alimentation, 1875.



injury to  
for the  
wet-nurse  
feeble mo-

MORTALITY  
OF  
FOUNDLING  
HOSPITALS.

The  
hospital  
an evil,

infants. After they are two or three years  
old they can do better without their  
mothers' milk than when they are young.

Comparing other milk with woman's  
we find that the ass's resembles it most  
although it is the weakest. Dr. C. West  
prefers it to cow's. The richest-milk  
comes from the ewe, goat and buffa-  
lo. In Tartary a kind of beer is  
made of ~~beard~~ milk. In Egypt, where  
the buffalo is used as a beast-of-bur-  
den, its milk is used and a white  
nearly tasteless butter is made from it.

MILK OF ASS.  
COW.  
EWE.  
GOAT.  
BUFFALO

BUFFALO BUTTER.

EGGS.

Passing after milk we come to  
eggs. We eat the eggs of any accessible  
bird and even of ~~some~~ reptiles. They  
are very nourishing. They have much  
wholesome when fresh.

effect  
next  
clock.  
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ay, at  
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legis-  
States  
ennial

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on of

The most interesting facts in financial cir-  
cles to-day, are lower prices for gold and  
stocks, and the shipment of a smaller amount  
of specie to Europe than had been antici-  
pated.

Money continues abundant at the usual  
rates, 4 a 6 per cent. on call. Considerable  
amounts of currency continue to find their  
way to this point from the interior, thus ad-  
ding to the existing ease. Prime business pa-  
per passes at 6 a 7.

The Treasury proposals to buy \$2,000,000  
bonds were responded to by offers amounting  
to \$3,716,350 at 110.98 to 111.40. The awards  
were Messrs. J. F. Schepler, Drexel, Win-  
throp & Co., and eleven other firms, at 111.11  
to 110.08.

All the dealings in gold were between 111½  
and 111¾. The market exhibited but little  
animation. The carrying rates were 1, 1½ and  
2 per cent.

Government bonds were dull and steady,  
closing as follows:

United States Currency 6s, 115½ a 116½; Regis-  
tered 6s, 1881, 116½ a 117; Coupon, 1881, 116½ a  
117½; 5-20 Regis., May and Nov., 110½ a 111½;  
5-20 Coup., 1882, 111 a 111½; 5-20 Coup., 1884,  
110½ a 111½; 5-20 Coupon, 1884,

holosome  
a healthy  
n for a  
ld herself.  
ndling  
raising is

young in-



FOUNDLING STATISTICS.—At a meeting held recently in New York, to place upon a firmer basis the Infant Asylum and Foundling Hospital of that city, it was stated that out of 35,000 births every year in New York, 2500 children were born out of wedlock, and that 3000 foundlings die annually from neglect. In 1869 out of 25,167 deaths, 7405 or 27 4-10 per cent. were children under twelve months, and in 1870 the mortality of infants was 31 per cent of the deaths. As an argument in favor of the necessity of the mother's care to raise children, it was stated that at an Asylum in Montreal where artificial means of sustenance were employed, out of 4059 foundlings, 3767, or 93 per cent. died. At Randall's Island, New York, when artificial means were used, only ten foundlings out of one hundred lived; where nurses were provided, 27 1/2 per cent. were raised, and full 70 per cent. were saved where the mothers nursed the infants.

Space of 8 pages for this

in the 1st mo.  
8 wks mo's, to 5 at night.  
under 1 hr 2 1/4 hrs  
6 mo's at night

Mean either after teething is over, or between spells.  
Menstruation; — pregnancy.  
(twins)

Nest to mother, wet-nurse; — with 2nd child best — 2 or 3 years.  
healthy; A good-tempered; — temperate —

Can disease be transmitted? Medicines can  
sometimes — yet doubtful.

If fed — chances a good deal less. (French foundlings & nurslings)  
Bottle always. — Cow's or goat's or ass's milk —  
a little sugar & little or no water — barley-water — oatmeal  
if appetite flag — vary — arrowroot — beef-tea — earring  
Borlari's Stimulant & Diarrhoea. — children water — when needed

part feeding  
End of 3rd letter  
Alimentation, 1875.  
Condensed Milk

Copy



injury to the mother it is unwholesome for the child. It is better for a healthy wet-nurse to be employed, than for a feeble mother to suckle her child herself.

MORTALITY  
OF  
FOUNDLING  
HOSPITALS.

The great mortality of foundling hospitals shows that hand raising is an evil, especially in very young infants. After they are two or three years old they can do better without their mothers' milk than when they are younger.

MILK OF ASS.  
COW.  
EWE.  
GOAT.  
BUFFALO

Comparing other milk with woman's we find that the ass's resembles it most although it is the weakest. Dr. C. West prefers it to cow's. The richest milk comes from the ewe, goat and buffalo. In Tartary a kind of beer is made of mare's milk. In Egypt, where the buffalo is used as a beast of burden, its milk is used and a white nearly tasteless butter is made from it.

BUFFALO BUTTER.

EGGS.

Passing after milk we come to Eggs. We eat the eggs of any accessible bird and even of ~~many~~ reptiles. They are very nourishing. They have much wholesome when fresh.



For Blackburn

from Frankland (in Lettby's book)

Weight of foods required to lift  
a man (140 lbs.) 10,000 feet.

|                    |                           |
|--------------------|---------------------------|
|                    | OK.                       |
| 3 Oatmeal,         | 20.5 <sup>(3)</sup>       |
| 4 Flour            | 21.4 <sup>(4)</sup>       |
| 7 Bread            | 37.5 <sup>(7)</sup>       |
| 9 Potatoes         | 81.1 <sup>(9)</sup>       |
| 5 Rice             | 21.5 <sup>(5)</sup>       |
| 1 Beef fat         | 8.9 <sup>(1)</sup>        |
| 11 Cabbage         | 192.3 <sup>(11)</sup>     |
| 2 Butter           | 11.1 <sup>(2)</sup>       |
| 6 Hard-boiled eggs | 35.3 <sup>(6)</sup>       |
| 10 Milk            | 128.3 <sup>(10)</sup>     |
| 8 Lean beef        | 56.5 <sup>(8)</sup>       |
| 12 Pale Ale        | 9 bottles <sup>(12)</sup> |

Showing that fats  
have much more  
 motive power than  
lean meat or starch.

Eggs & bread (from seeds of wheat &c.)  
are

See p. 102

\* <sup>are eaten</sup> Echini in S. America; they are radiated.  
some also in West Indies.



→ Protoplasmic food! Milk, Eggs, Bread,  
Potatoes, Tomatoes, Fruits.

COMPOSITION  
OF EGGS.

albumen, the white being composed of it;  
also much <sup>in the milk</sup> fat and some casein and salts.

## DIGESTIBILITY

Komarine food  
Protoplast!

Eggs are digestible both raw and cooked. With the exception of eggs and brandy, <sup>or whiskey or rum</sup> been up, being given to <sup>the</sup> ~~sick~~ <sup>full persons,</sup> eggs are generally eaten cooked. They are <sup>commonly said to be</sup> most digestible when the white is <sup>the not hard,</sup> ~~formed~~ and the yolk is just beginning to <sup>become solid.</sup> They are <sup>with most persons</sup> also digestible when hard-boiled if properly chewed. It is not true that 1 egg = 1 lb of meat.

MEATS.

TOO MUCH IN  
AMERICA.

Meat is the next compound substance. Although the theory of vegetarianism is not to be ~~followed~~<sup>possibly</sup>, it is a fact that in this country too much meat is eaten. Dr. Ray says that a source of disease here is animal food. Less is eaten in Europe. ~~We ought not to be without meat.~~

We eat meat of all the divisions of the animal kingdom: Crypt, radiata

# PROTOZOA

We unintentionally ~~kill~~<sup>allow</sup> millions of protozoa. A ~~poor~~<sup>poor</sup> Brahmin was horrified when he found that water contained <sup>hydra, & a microscop</sup> ~~multitudes~~<sup>multitudes</sup> of animals, but was somewhat consoled when he was told that boiling would kill <sup>them all</sup> ~~these~~.



copy here from

Q See, however, p. 40 for food values: (Lethby)  
 Cheese, Mutton & Red Herring all more N than Beef.  
 Certainly less proportionately available; especially in cheese & red herring.

Good meat — (Lethby)

1. neither pale pink nor dark purple  
 (1st chronic, 2nd acute disease)
2. marble-veined with fat —
3. not wet — but firm.
4. Little odor — none unpleasant.
5. Shrink little in cooking
6. Acid reaction of juice
7. Few infusoria under microscope



animals. The Schuylkill water has multitudes of them; sometimes live things visible to the naked eye.

# MAMMALS

## BEEF.

Mammals furnish our chief supply of food. Beef is <sup>the choicest meat</sup> ~~the most~~ nitrogenous; more so than any other article. ~~It~~ <sup>Food</sup> has much fat even in what is called lean. It can support life alone. ~~It is not an evidence that~~ <sup>one of the</sup> ~~a~~ <sup>group of</sup> nitrogenous substances alone will support life; for to do this, at least two kinds of food are necessary and beef has two; <sup>the</sup> oleaginous & <sup>the</sup> nitrogenous.

NOT MERELY  
NITROGENOUS

DIGESTIBILITY.

Beef is ~~very~~ easily digested <sup>by so many people,</sup> ~~as often,~~ <sup>generally</sup> as any other article. Dyspeptics find that they must prefer it to any other meat. ~~Veal~~ <sup>however,</sup> or young beef <sup>is</sup> not easily digested, even by healthy persons. Hammering it will make it somewhat digestible. (Paris restaurants.) <sup>more</sup>

## VEAL

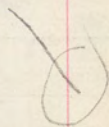
Good Mutton is very digestible. Lamb differs from veal, in being as digestible as mutton. We <sup>seldom or</sup> never get it too young. Pork is the least digestible of all. All these statements are founded on ~~the~~ observations, made on the stomach <sup>in part</sup>.

## MUTTON

## LAMB.

## PORK.







<sup>the Canadian soldier, St. Beaumont's patient, &c.</sup>

OBSERVATIONS  
ON THE  
STOMACH  
OF  
ALEXIS  
ST. MARTIN.

of Alexis St. Martin, The experiments on him are considered as primary authority, but they alone are not sufficient <sup>for all</sup>. Different people digest different things differently. A common saying is "What's one man's meat is another man's poison".

DIFFERENCES.

CANNOT ARRIVE  
AT ANY  
DEFINITE  
RULE  
OF  
DIGESTION

Besides this we must <sup>to judge</sup> know accurately how well the meat was cooked; whether it was tough or tender, &c. or else we cannot arrive at any definite rules for digestion.

PORK IS  
UNWHOLESOME.

<sup>Comparatively</sup> All men agree, however, that pork is unwholesome.

MEASLES.

CYSTI-CERCI.

TAPE-WORM.

TRICHINA

Of late years much interest has been attached to pork on account of its being infected with <sup>parasites</sup> measles and ~~cysti cerci cellulosa~~. Measly pork is <sup>very</sup> unwholesome. Since the discovery of the metamorphosis of <sup>a form of parasite</sup> the cysti cercus into the tape-worm, the still more startling discovery of the spiral trichina has been made. When swallowed they multiply and work their way into the muscles. Trichiniasis <sup>or trichinosis, so produced</sup> is sometimes fatal <sup>about</sup> <sup>half the cases in adults</sup>.

when the system shows their presence occur.



<sup>first recorded</sup>  
 Trichiniasis in a few instances in  
 U.S. in 1866. One, in 15 persons, in Marion,  
 Linn Co. Iowa, ~~died by the country paper~~. Several died. Microscope  
 showed 100,000 or 200,000 trichinae to 1 sq. inch of  
 muscle. Raw ham had been eaten. More  
 cases in 1867. A member of the Univ. class, 1870, in 1866 a student  
 in Univ. of Iowa, examined some of the cases & specimens with Prof. S. H. Hirsch.  
 (The demand of the country paper (O. S. Owen) therefore is null).  
 Case in London, 1873 - thought to have had  
 trichina 9 years!

Cobbold states that more tape worms  
 otherwise in Ohio, &c. (mediocanellata, beef,  
 otherwise in Ohio, &c. (solum, pork).  
 but beef than from messy pork. Trichina not  
 from beef at all - only pork - i.e., hogs  
 meat in some form. However, that  
 Agassiz says, all raw meat,  
 especially fish, abounds in parasites - all  
 killed by cooking well.



Trichina (Lethal)  
and meat : 1

TRICHINA  
DESTROYED  
BY  
HEAT AND  
SMOKE.

SOMETIMES  
FATAL.

DETECTION  
IN MEAT.

GAME.

DUTY  
TO  
SICK.

In 1. Neither pale pink, the trichinae must  
 be it. 2. Neither pale pink, the trichinae must  
 that nor dark purple. It is ~~considered~~  
 heat (or chronic 2<sup>nd</sup> acute) are destroyed by  
 those (or chronic 2<sup>nd</sup> acute) are destroyed by smoke  
 ing. 2. Marble-veined with often found in small  
 minute fat. ing any injury. Leidy.  
 When 3. Not wet, but they are dangerous.  
 They firm. irritation and often  
 death 4. Little odor, none  
 I unpleasant. 5. Shrinks little in meat becomes a  
 matter 5. Shrinks little in meat becomes a  
 as cooking. 6. Acid juice in of the eye, as a  
 black <sup>at a certain stage</sup> trichina is surrounded  
 by a capsule which makes it look  
 like a white speck. They cysticercus are  
 often detected <sup>by harpooning one of the eye-muscles or under</sup> under the tongue of  
 the hog. <sup>thorough cooking</sup> the only security. ←  
 i.e. wild meat <sup>certain</sup>  
 Game generally has a richness  
 and fineness of flavor which is par-  
 ticularly pleasant to the sick. There  
 is nothing more delicious than freshly  
 killed <sup>young</sup> venison. <sup>very good frozen, too.</sup> To please the appe-  
 tit of the sick is a duty. Rabbit, squirrel



*Cyathostomum* or *Trichinostomum* of pork,  
first recorded  
U.S. in 1878 little veins, size of  
Linn Co. hempered, in cellular  
tissue between muscle  
fibres. Microscop.  
showed 1000 short ellipt. veins  
muscle.

Cases in 1880 with short neck more  
in Univ. of Iowa or less divided transverse  
(The dorsal of the counter term. by sort of head, or is null)  
Case in London, 18 with double row of  
hooks 32 in no.

Cab hooks 32 in no.  
The globular bodies  
and beef the like months.

from beef at all — of pork — i.e. hogs  
meat in some form. Agassiz says, however, that all raw meat,  
especially fish, abounds in parasites — all  
killed by cooking well.

instances in  
persons, in Marion,  
Died. Microscope  
showed 5 sq. inch of  
beef eaten. More  
Univ. Class, 1870, in 1866 a student  
died & specimen sent Prof. G. Hinrichs.  
(or is null)

Labe worms  
*Trichina* (mediocanellata, beef,  
sodium, pork)  
works, *Trichina* not



TRICHINA  
DESTROYED  
BY  
HEAT AND  
SMOKE.

SOMETIMES  
FATAL.

DETECTION  
IN MEAT.

GAME.

DUTY  
TO  
SICK.

In order to <sup>produce death,</sup> ~~be fatal~~, the trichinae must be in large numbers. It is ~~considered~~ <sup>believed</sup> that these animalcules are destroyed by heat; and by the majority of good authorities <sup>long</sup> that they are destroyed by smoking. Trichinae are often found in small numbers without doing any injury. <sup>Leidy.</sup> When numerous they are dangerous. They cause febrile irritation and often death. \*

Their detection in meat becomes a matter of importance. The cysticercus may be seen by the eye, as a black speck. A trichina <sup>at a chain stage,</sup> is surrounded by a capsule which makes it look like a white speck. The ~~cysticercus~~ are often detected <sup>by harpooning one of the eye-muscles or under</sup> under the tongue of the hog. <sup>Thorough cooking</sup> <sup>v.e. mild meat</sup> is the only security. <sup>certain</sup>

Game, generally, has a richness and fineness of flavor which is particularly pleasant to the sick. There is nothing more delicious than <sup>young</sup> freshly killed venison. <sup>very good for you, too.</sup> To please the appetite of the sick is a duty. Rabbit, squirrel



5th Lecture, 1867.

Bear's meat

\* Of Game birds there are none more  
 delicate than the seed birds obtainable  
 in their season at our restaurants. Our Wood-  
 cocks are also very good — and the <sup>kind of</sup> grouse  
 called pheasants quite so; — as well as our  
 robins <sup>and</sup> other birds. The true pheasants are not native to America.

THE resources of this country in the way of fish and game were admirably illustrated at a recent game dinner in Chicago, at which the following animals were served up: Oysters, red snapper, whitefish, mountain sheep, black bear, buffalo, wild turkey, antelope, coon, woodchuck, canvas-back duck, prairie chicken, wild geese, black duck, green winged teal, red head duck, blue winged teal, spotted grouse, blue billed widgeon, ruffed grouse, opossum, leg of elk, black tail deer, jack snipe, quail, fox squirrel, gray squirrel, red bird, partridge, plover, sand snipe, red squirrel, terrapins, rabbit, wild pigeon, hare, black-bird and grouse.

June, 1869



now in our market in winter

rel, buffalo (particularly the hump) ~~are~~  
are all good food. ~~in strength~~

## BIRDS.

CHICKEN.  
TURKEY.

Birds come after mammals as food. Chicken and turkey are unsurpassed.

They are <sup>almost if not quite</sup> as digestible as beef. They are <sup>often</sup> preferred to it for the sick, <sup>especially in the form of</sup> as chicken

DUCK.

GOOSE.

soup. The duck and goose, are less delicate; they are more rank and gross. They have more fatty matter and are less digestible. There are differences among them.

CANVAS-BACK  
DUCK.

The canvas-back duck is the most digestible of these <sup>light fishy</sup> species.

PIGEON  
GROUSE  
PARTRIDGE  
&c.

Pigeons, grouse, partridges &c. are very digestible. \*

IMPORTANCE  
OF  
VARIETY IN  
OUR FOOD.

We may as well speak here of <sup>of diet</sup> variety in our food. Variety is an important principle <sup>in hygiene</sup>. It is not merely a luxury but a necessity. If possible we should have a daily variety; not necessarily many dishes on any one day.

WHITE  
&  
DARK  
MEAT

There is a difference <sup>of tenderness</sup> between the white and dark meat. Generally, though not always, the white is the tenderer. It was a mistake of Dr. Hammond to say that the white had undergone



End 5<sup>th</sup> lecture, 1870.

Different parts are whitest in different birds.

6



fatty degeneration. It is ~~just~~ as nat-  
ural as the black. The difference is  
in the coloring matter. <sup>Wing mostly little used in</sup>  
<sup>domestic chicken & turkey.</sup>

REPTILES.

TURTLE.

TERRAPIN.

Reptiles come next in order.  
Green turtle is <sup>popularly associated with aldermen;</sup> a favorite in England,  
while we consider terrapin as a ~~great~~

luxury. These articles do not <sup>quite</sup> deserve the  
reputation which they have of being <sup>very</sup> un-  
wholesome. The cause of this opinion  
is that they are generally eaten in ex-  
cess, being added to a feast. <sup>Large quantities</sup> Turtles &  
Terrapin <sup>if simply cooked, fresh</sup> are as digestible almost as  
any ~~meat~~, even ~~with~~ dyspeptics. Other  
reptiles are not eaten <sup>very</sup> much. In France

FROGS.

LIZARDS.

FISH

<sup>as well as here by a less extent,</sup> the hind legs of frogs are eaten; <sup>rather than</sup> these  
are said to taste like chicken. In South  
America, lizards are eaten. It is ~~not~~  
a matter of taste. <sup>of the sea or of fresh water.</sup>

Fish <sup>of the sea or of fresh water.</sup> are eaten all over the  
world. In some places they constitute  
the only food. Those who ~~live on~~ fish alone  
are <sup>found to be comparatively</sup> feeble. In the Scandinavian countries  
may live on fish. <sup>They are especially liable to a kind of leprosy.</sup> Many islanders  
Great Britain <sup>live on</sup> the same. Fish is less  
<sup>kind of diet.</sup> <sup>according to</sup>

Pecherans  
live on fish



\* Catalogued as such in a popular work are — the old Wife — ~~Tran fish~~  
~~Land crab~~ — Mellowbilled Sparat — Cory-  
 phona (often called Dolphin) — Blue Parrot-  
 fish — Conger — Eel — Smooth Bottle-fish —  
 Barracuda — ~~Tran~~ Blue Spanish Mack-  
 erel — King fish (Scomber Maximus) — ~~the~~  
 the Blower & the Foot fish (Cap 1 End 1/2)  
 (Ordin)

If I in the old Testament the mummus Israelites  
 are said to have lamented the "fish of Egypt."

Dr Lethbridge mentions one kind of fish the attempt  
 to eat which has proved fatal within an hour.  
 One calls the bladderfish a toxic fish is said  
 to be quite poisonous.



strengthen food, though highly See again p. 40 for Lethetys Food Values, 87

nitrogenous, than birds, which are less so than mammals. Fish has a large proportion of salts, as phosphates. Brains?

SUBJECT TO  
UNWHOLESOME-  
NESS

Fish are more subject to unwholesomeness than any other meat. There are some which are said to be always unwholesome. But we cannot altogether depend on such statements. Thus the fish of the Nile, are said to be unwholesome; yet the boatmen eat them. Idiosyncracies are more common in regard to fish than any thing else. Fish spoil soon. Fresh fish are more wholesome than salt. Salmon and shad should be taken when they are ascending the river, to spawn and not when they are descending. Trout, rock, perch, sheep's head, halibut, &c. all are good.

FISH OF  
THE NILE.

IDIOSYNCRACIES

SALMON

SHAD.

TROUT

PERCH

SHEEP'S HEAD

HALIBUT.

COD.

One of the most pleasant fishes is cod when fresh. When eaten just after they are caught, they have a delicate flavor. This finely illustrates the difference between fresh food and that which has been kept.

ARTICULATA.

We next come to articulata



Space 1 1/4 page further

\* Something depends on their cooking, however.

→ Roasting -

Panning -

Steaming -

Steaming -

Broiling -

Raw -

Tryps -

Prof. Pierre Biot

or Baron Bisse

or M. L. L. L.

or Loyer

↑ <sup>so are</sup> several other mollusks <sup>both</sup> of the sea  
fresh water.



shrimp prawns

quite fairly

LOBSTER.

CRAB.

LOCUSTS.

BEETLES

ANTS.

MOLLUSCA.

OYSTER.

AMERICAN  
OYSTERS.

CLAMS.

MUSSELS.

CURIOSITIES  
OF DIET.

MONKEYS.

Lobsters and crabs, are very digestible.

They have been greatly abused for the same reason as turtle and terrapin.

They spoil very soon hence they should be bought alive. Of other articulates, —

In the East, locusts are eaten. It is doubtful whether ~~the~~ John the Baptist are the insects or the fruit of the locust tree. <sup>candied beetles</sup> <sup>other parts of</sup>

In Vienna, <sup>said to be</sup> are eaten and in Austria ants are served up alive.

We next come Of the mollusca. <sup>we</sup> <sup>may</sup> <sup>well</sup> begin with oysters; <sup>as</sup> American oysters <sup>are</sup> <sup>decidedly</sup> the best. <sup>English</sup> ones have a coppery taste which is very disagreeable to ~~an~~ American after having been used to those of his own country.

<sup>These of the ~~same~~ coasts are also inferior to ours.</sup> Oysters are very easily digested. \* <sup>kind</sup>

Clams are much tougher <sup>the common</sup> and not nearly as digestible although <sup>this</sup> soup is.

They ought to be exiled from <sup>the</sup> food. <sup>clam soup is not good for cholera</sup> — but it is good for <sup>hunger</sup>.

Mussels are some times eaten as food.

It may be well to mention here some curiosities of diet. In Africa, monkeys are eaten; in South America, monkeys

<sup>Dr. S. Baker said very good after cholera overcome.</sup>



\* ~~White ants by some tubes in Africa as~~  
 well as in S. America,  
 (Ants frozen, <sup>by</sup> lumbermen Maine)

+ ~~Dr Hayden has witnessed at least a similar ex-~~  
 -perience in the Rocky Mts. region. In foreign  
 markets — perhaps cats in disguise?

Sam. Miller's eulogy in Pickwick, on them is  
 "noble animals!"

~~("A merry good thing is a) meal pie, when you're  
sure it aint kittens!"~~

The Western Locusts would no doubt be very good food.  
 Proved so, 1875, by Prof. Riley of Missouri.



LIZARDS  
ALLIGATORS  
COCKCHAFERS  
HEDGEHOG.  
DOES.

HORSES.

EXPERIMENT  
ON HORSES.

also liz  
cockchaf  
the liz  
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SNAILS.

RATS.

WORMS

SWALLOW'S  
NEST.

VARIOUS REFUSALS  
OF FOOD.

CRABS

LOBSTERS.

unless ~~driven~~ <sup>ancient</sup> ~~the~~ <sup>ancient</sup> ~~romans~~ <sup>ancient</sup> ~~eat~~ <sup>ancient</sup> ~~snails~~,  
and it appears from a painting dug  
from the ruins of Pompeii that they  
~~eat~~ <sup>one kind of dog</sup> rats. The Chinese eat rats, earth  
worms, and the nests of a certain kind  
of swallow <sup>making Bird's nest Soup</sup>. Musk-rats are  
eaten by some <sup>quite</sup> cultivated people in the state of Delaware.  
On the other hand there are  
some refusals which are as peculiar  
as these. The Shetland islanders will  
not eat crabs or lobsters. The Aus-

in Italy,  
~~hedgehog~~, by  
~~dogs~~. In  
other cities  
nourished ar-  
cientific gentle-  
val friends to  
several prep-  
ring their prais-  
that it was  
ne difficulty  
horse is a  
it is not  
ed be sold  
<sup>Antes?</sup>



\* ~~White~~  
^ well as in

+ ~~Dr Van~~  
^ - penance in  
markets -

("A merry

Spiders are eaten in  
New Caledonia & some other  
savage countries. Lalande  
the astronomer was very fond  
of spiders. In Brazil  
the children were seen by  
Humboldt to eat alive  
Centipedes more than a foot  
long. Darwin says the  
Caterpillars of the Hawk  
moth is delicious - Kirby  
offered the animal, say the same  
of ants -

sure it and Ritters!

in Africa as  
Humboldt & Mair

get a similar ex-  
- In foreign  
equival?

nick, on them is

, when you're

The Western Locusts would no doubt be very good food.  
Proved so, 1875, by Prof. Riley of Missouri.



LIZARDS  
ALLIGATORS  
COCKCHAFERS  
HEDGEHOG.  
DOGS.

HORSES.

EXPERIMENT  
ON HORSES.

SNAILS.

RATS.

WORMS

SWALLOW'S  
NEST.

CURIOUS REFUSALS  
OF FOOD.

CRABS  
LOBSTERS.

also lizards and alligators; in Italy, cockchafers\* in England the hedgehog, by the Gipsies, and dogs. In Vienna

of Europe, the other cities acknowledged an article of scientific gentleness. Several friends to a dinner

preparations of meat. After hearing their praises of it, he informed them that it was all horse-flesh. There is one difficulty about horse flesh. As the horse is a very valuable animal alive, it is not likely that the flesh would be sold unless diseased. <sup>Sup of Paris, 1870, - Jardin des Plantes!</sup> The Romans ate snails, and it appears from a painting dug from the ruins of Pompeii that they ate rats. The Chinese eat rats, <sup>one kind of dog,</sup> earth

worms, and the nests of a certain kind of swallow. <sup>making Birds' nest Soup.</sup> Musk-rats are eaten by some quite cultivated people in the state of Delaware. On the other hand there are some refusals which are as peculiar as these. The Shetland islanders will not eat crabs or lobsters. The Aus-



Spiders are eaten in  
New Caledonia & some other  
savage countries. Lalande

in Africa as  
by Humboldt & Mair

\* White  
^ well as in

EDIBLE DOGS. — A French admiral has sent to the Jardin d'Acclimatation at Paris some specimens of the Chinese edible dog. They are described as "small, hairless, and extremely fat, being reared on an exclusively vegetable diet." It is intended to kill one of them soon, and to cook it à la Chinoise; and a select party of Parisian gastronomists are to be invited to the banquet, with a view to deciding upon the advisability of acclimatizing the animal. The

get a similar ex-

+ Dr  
^ perenne in  
markets

in foreign  
equival?

Catupillas of the hank-  
5 with so delicious - Kirby's snake, on them is  
Spence the antomel. say the same  
of ants -

("A merry

, when you're

sure of some

The Western Locusts would no doubt be very good food.  
Proved so, 1875, by Prof. Riley of Missouri.



LIZARDS  
ALLIGATORS  
COCKCHAFERS  
HEDGEHOG.  
DOES.

HORSES.

EXPERIMENT  
ON HORSES.

SNAILS.

RATS.

WORMS

SWALLOW'S  
NEST.

CURIOUS REFUSALS  
OF FOOD.

CRABS  
LOBSTERS.

also lizards and alligators; in Italy, cockchafers, <sup>in England</sup> the hedgehog, by the Gipsies, <sup>the Gipsies</sup> Col. Fremont <sup>the</sup> dogs. In Vienna, Paris, and several other cities of Europe, horse is <sup>now</sup> an acknowledged article of food. An eminent scientific gentleman in Paris invited several friends to a dinner at which there were several preparations of meat. After hearing their praises of it, he informed them that it was all horse-flesh. There is one difficulty about horse flesh. As the horse is a very valuable animal alive, it is not likely <sup>here at least</sup> that the flesh would be sold unless <sup>Sup of Paris, 1870</sup> diseased. <sup>ancient</sup> The Romans <sup>ancient</sup> ate snails, and it appears from a painting dug from the ruins of Pompeii that they ate rats. The Chinese eat <sup>one kind of dog</sup> rats, earth worms, and the nests of a certain kind of swallow. <sup>making Birds' nest Soup</sup> Musk-rats are eaten by some <sup>quite</sup> cultivated people <sup>in the state of Delaware</sup>. On the other hand there are some refusals which are as peculiar as these. The Shetland islanders will not eat crabs or lobsters. The Aus-



\*Pouchee in England are said not to like  
venison; and kill deer of the parks to sell it.

End of 5<sup>th</sup> Lecture, 1868.

+ Dr. Lettichy says, however, that Indian meal is now  
getting more into use in Ireland because of its cheapness.

[End of 6<sup>th</sup> Lecture, 1873.]

Remark at beginning of 6<sup>th</sup> Lecture, 73,  
on specimen of milk, & on  
Table of amount of food  
to keep a man 10,000 feet.  
But starch gives most motor-force.



OYSTERS.

MILK.

Columbian

INDIAN CORN.

Italians will not eat oysters. The South Sea islanders will not <sup>eat turkey which abounds near them</sup> ~~eat turkey~~ milk. The South Americans will not <sup>eat</sup> ~~eat~~ <sup>many</sup> ~~eat~~ the Irish who come to America <sup>generally</sup> will not eat Indian corn. English people <sup>often do not eat</sup> ~~often do not eat~~ <sup>are very much affected by</sup> ~~are very much affected by~~ various vegetables.

PECULIAR

IDEAS

ABOUT

FOOD.

Our choice of food is mere fancy. There is no doubt that our range of food could be extended if we would drop some of our prejudices. A gentleman from the West, at a time when rail-road connection between there and here, was imperfect, saw a man at a stand, eat an oyster, and was disgusted at his ~~swallowing~~ the nasty thing alive and whole.

COOKING.

STEWING

&  
BOILING.

ROASTING

&  
BAKING.

The manner of cooking our food demands some attention. The most tender condition <sup>is got by</sup> ~~is~~ <sup>is</sup> maceration in water, with heat, that is, boiling or stewing. Roasting and baking save <sup>most of</sup> the matter of the meat. Of the two, roasting is the best. Nine times out of ten, when meat is ordered to be roasted, it is baked. If it is roasted in the tin-kitchen the results of empyreumatic change are prevented.



° e.g. acrolein - same that smells when an oil lamp or tallow candle is blown out -

\* Lard is good butter is of course the safest for a doubtful stomach. But any fat may, at high heat, give off some acrolein & other undesirable products. -

Boiling -



Some more or less

empneumatic

If it is baked, ~~the~~ <sup>Some more or less</sup> unwholesome oils which are thrown off, are retained, having no means of escaping. Cooks object to roasting on account of the ~~trouble~~ <sup>trouble</sup> of keeping the tin-kitchen clean. By roasting, osmazome, a pleasant-tasted, brown substance is formed on the surface of the meat. It is a highly nutritious nitrogenous ~~material~~. <sup>Well done meat</sup> ~~not burnt or dried up~~ <sup>is more hygienic.</sup> ~~Waterhouse~~ <sup>Hawkins.</sup>

OSMAZOME

FRYING.

EMPNEUMATIC CHANGE.

Frying is the least wholesome way of cooking meat, on account of the empneumatic change which takes place <sup>with fat used</sup>. \* When we make this statement it must be remembered that we are speaking comparatively (for most of us, well fried oysters do well enough).

DIFFERENT WAYS OF BOILING.

There are different ways of boiling. If we want to keep all the material of the meat, but <sup>are less</sup> ~~not~~ to have it well cooked, <sup>through</sup> we put it in boiling water at once. The albuminoid material at the surface is coagulated and the action of the heat is impeded. If we want to get the strength of the meat into the water, we put it in cold water and



~~\* The same difference does not belong  
according to whether we want the soup strong  
or the meat to keep its strength; by~~

Chloro-pepsin

(Morcel?) or Leard?)

\* A distinguished English physician lately proposed  
the partial digestion of meat before it is eaten,  
by mixing it with solution of chlorohydrate and pepsin  
(Boudaults) or strips of calf's stomach - (venet?)

Pavy says Boudaults pepsin is mostly inert. Dr.  
Beale thinks pure pepsin can be obtained & kept.

Scarful chemist, ~~now~~ probably  
Dr. Boudaults, or of our best pharmacists, believes it soluble.  
I presume reliably,  
in Philadelphia, a good  
order -



SAME THING  
IN ROASTING.

TENDERNESS.

FRENCH  
COOKS.

MECHANICAL  
MEANS.

MAN  
THE  
ONLY  
COOKING  
ANIMAL.

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BOS

# EDITORIAL NOTES.

FRENCH TEMPERANCE PRIZES.—The French Temperance Society, of Paris, offers for the year 1875 three prizes for competition. 1st. For determining by the aid of repeated chemical analysis, on a large number of samples obtained at random from retail shops in Paris and the Departments, the analogies and differences which exist between spirits of wine and the various alcoholic drinks; a prize of 1000 francs (\$200). 2d. To ascertain whether it be possible, by analysis of their chemical or physical properties, to distinguish natural wines and brandies arising from fermentation of grape-sugar or distillation of the juice of the grape, from those of artificially prepared and fortified beverages; a prize of 500 francs (\$100). 3d. To determine, by chemical observations and experiments, the differences which result to the system from the use of pure natural wines and alcohols, and of others manufactured and artificially fortified and compounded with spirits; a prize of 1000 francs. The treatises to be written either in French or Latin, and bearing a motto or device, accompanied with the name of the writer, in a sealed envelope, addressed to Dr. Lunier, general secretary, No. 6 Rue de l'Université, Paris, before December 1st, 1874.

## A BAD STATE OF THINGS IN HIGH PLACES.

—Dr. Lankester refers, in his last report to the Mayor of St. James's, Westminster, to three cases

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r meat will

answer the same end. It is good economy to get the best quality. What is lost in the price is gained in the ease of digestion.

The whole theory of cooking is to begin digestion. Man is the only animal that cooks its food. The great object is to make it soluble in the digestive fluids.

It is sometimes asked why we



## TRY.

\* This  
according to  
the book

more easily digested when cooked than raw; and Fick has also shown that there is at any rate no advantage in the uncooked form over the cooked, so far as digestibility is concerned. Fat sauces must be abstained from, because they shield other food from the action of the gastric juice. The only vegetables which Leube allows are asparagus, young peas, carrots, and mashed potatoes. Bread he gives stale. He usually forbids all alcoholic liquors. If none of these foods agree with the patient, he gives him an extract of meat, or rather a peptone solution, prepared by the action of acid on meat *in vacuo* at a high temperature. A fine emulsion is produced, which has a slimy consistence and a pleasant taste, somewhat resembling Liebig's extract, but it differs from the latter in containing all the constituents of the meat. This extract is easily digested, and is tolerated by the most irritable stomachs. Patients with gastric ulcer lose their pains from the day they begin to take it. Of course the use of such an extract is not restricted to diseases of the stomach. It is indicated wherever an absolutely unirritating food is required — for example, in typhoid fever, dysentery, tubercular ulceration, and peritonitis.

Chloroform  
Peperin

(Morrell?) or Leared?)

A distinguished English physician lately proposed the partial digestion of meat before it is eaten, by mixing it with solution of chloroform and & peperin (Boudaults) or strips of calf's stomach — (rennet?)

Pavy says Boudaults peperin is mostly inert. Beale thinks pure peperin can be obtained & kept.

96.  
Scarcely chemist, ~~more~~ peptone, & some of our best pharmacists, believe it suitable.  
I presume reliably.  
Procter, in Philadelphia, a good



It is probable that young veal, chicken, pigeon, boiled fish, and underdone beef, are the most suitable foods for most patients — of course, with the exception of milk and eggs, which are the most digestible of all. Meat should be underdressed, not only because it becomes tough by much cooking, but because Fick has recently shown that the same gastric juice digests cooked meat three times as slowly as raw. Eggs should be taken soft-boiled, and not raw, for Lenbe has found by experiments on himself that their albumen is

Hygiene

SAME  
THING  
IN ROASTING.

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at 0  
thro

roasting, the  
we wish the meat  
put it to the fire  
to be cooked  
more  
fire gradually  
be wished for

TENDERNESS.

FRENCH  
COOKS.

MECHANICAL  
MEANS.

in ~~meat~~ is ~~required~~. In America, this is <sup>too often</sup> neglected. The French are <sup>really</sup> the best cooks in the world. Cooking is perhaps better in the United States than in Great Britain. It is probable that in France, mechanical means are resorted to, to make meat tender, such as hammering. Selecting tender meat will answer the same end. It is good economy to get the best quality. What is lost in the price is gained in the ease of digestion.

MAN  
THE  
ONLY  
COOKING  
ANIMAL.

The whole theory of cooking is to begin digestion. Man is the only animal that cooks his food. The great object is to make it soluble in the digestive fluids.

It is sometimes asked why we



~~\* The~~  
~~according to~~  
~~a the next~~

land a synonym for a water-proof coat, has patented a process of mixing carbon with india-rubber in a peculiar way, and claims that the product is better adapted for a variety of uses in the arts than any compound before known. — Dr. Vogel, of Berlin, in a letter to the *Philadelphia Photographer*, says that old daguerreotypes that have turned yellow, blue, or black, will often become as bright as new if simply placed in a solution of cyanide of potassium. — A writer in an English medical journal considers it well established that "some relation exists between a depressed state of the barometer and the prevalence of frontal headache."

these foods agree with the patient, he gives him an extract of meat, or rather a peptone solution, prepared by the action of acid on meat *in vacuo* at a high temperature. A fine emulsion is produced, which has a slimy consistence and a pleasant taste, somewhat resembling Liebig's extract, but it differs from the latter in containing all the constituents of the meat. This extract is easily digested, and is tolerated by the most irritable stomachs. Patients with gastric ulcer lose their pains from the day they begin to take it. Of course the use of such an extract is not restricted to diseases of the stomach. It is indicated wherever an absolutely unirritating food is required — for example, in typhoid fever, dysentery, tubercular ulceration, and peritonitis.

sting  
sting  
by  
Schwarz's Peptone

Scarful chemist, ~~now~~ probably  
Dr. a. Parvelli, one of our best pharmacists, believes it reliable.  
I presume relatively

(Morcel?) or Leard?)

X A distinguished English physician lately proposed the partial digestion of meat before it is eaten, by mixing it with solution of chlorohydrate and pepsin (Boudaults) or strips of calf's stomach — (venet?)

Pavy says Boudaults pepsin is mostly inert. Beale thinks pure pepsin can be obtained & kept.



SAME  
THING  
IN ROASTING.

heat it gradually. In roasting, the same thing occurs. If we wish the <sup>meat</sup> to be rare inside we put it to the <sup>hot</sup> fire at once. If we wish it to be cooked through, we ~~bring~~ <sup>more</sup> to the fire gradually.

TENDERNESS.

FRENCH  
COOKS.MECHANICAL  
MEANS.

The great point to be wished for in meat is tenderness. In America, this is <sup>too</sup> <sup>often</sup> neglected. The French are <sup>really</sup> the best cooks in the world. Cooking is perhaps better in the United States than in Great Britain. It is probable that in France, mechanical means are resorted to, to make meat tender, such as hammering. Selecting tender meat will answer the same end. It is good economy to get the best quality. What is lost in the price is gained in the ease of digestion.

MAN  
THE  
ONLY  
COOKING  
ANIMAL.

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It is sometimes asked why we



\* and in S. America, dried meat. Such is also the pemmican of the North West.

"Raw beef Brandy cure of consumption" is lately talked about. I do not find yet an authentic medical account of it. M. Tustor (Archives G n rales de M decine, Nov 66) reports to the French Academy as the result of more than 2000 cases of his own and of others that "the raw meat of mutton or beef and the use of alcoholic beverages, ~~in~~ in variable amounts according to the circumstances of the case, have the effect of arresting phthisis" unless in the late stage.

Extract of Raw beef with Cold Water, expressed

A Cut it up very fine & soak it 12 hours with very little cold water - shaking it in a bottle several times in the day; salt to taste. I would rather rely upon <sup>fresh</sup> beef-essence or tea.



RAW  
MEAT.

cannot eat raw meat. We can eat it if it is tender. In the Arctic regions frozen raw meat is eaten. \* It prevents scurvy better than cooked meat does.

CHOLERA  
INFANTUM

In cholera infantum, the child is <sup>sometimes</sup> ~~fed with~~ finely-scraped fibres of raw meat, when it will not take beef tea.

CYSTI-CERCI

One fact in reference to raw beef may be remarked. Cysti-cerci are sometimes found in beef and cause tape-worm. <sup>Dr Leidy reports a case in 1872. C. mediana, etc.</sup> The microscope ~~is~~ <sup>may be</sup> used to detect them. <sup>and a somewhat similar case was mentioned to me by a member of the class (univ.) in 1874.</sup> In several cities of Europe there are butchers' microscopical societies. † Ordinary.

MICROSCOPE.

LIQUIDS.

SOUPS.

We come now to Liquids. Soups are the first to speak of. They are too thin. They distend the stomach and weaken the gastric juice. The best for the sick is chicken soup. <sup>Thin & greasy</sup> Soups are especially bad <sup>for use</sup> in summer. The same remark does not apply to the concentrated preparations of meat.

CONCENTRATED  
PREPARATIONS  
OF BEEF.BEEF  
ESSENCE

Beef essence is made by putting finely cut beef in a bottle corked loosely.



\* \* \* <sup>Strain or</sup> <sup>unless through a coarse sieve,</sup> Don't filter beef tea, It should, after  
 being simply poured off from the heaviest  
 fibrous part at the very bottom, be strained  
 when used — so as to have a rich brown  
 & opaque appearance. Salt it to taste.  
 When the stomach is very weak a few particles of  
 red pepper may be stirred into it.

In delirium tremens, beef essence with  
 red pepper in it will often prove the best of  
 soporific & curatives.

[End of 15<sup>th</sup> Lecture, 1871;  
 5<sup>th</sup> on Alimentation.]

H. Voit & other investigations show that in  
 Liebig's Extract of Beef a good deal of the most  
 nourishing part of the meat is left out. Such an article is  
 rather a stimulant & digestive alternative than a food. Quite  
 probably the salts, especially of potassium, are its most active ingredients.  
 Liebig says alkaloids.

Chemist, March, 1873, for Liebig's statement.



for a length of time together,

The bottle is put in water which is allowed to boil <sup>several hours</sup> and in this manner the essence is obtained. It is the strongest of concentrated food. "Eau de force," - aqua vis.

BEEF  
TEA.

BEST METHOD OF  
MAKING BEEF TEA.

Beef tea is weaker but <sup>sometimes</sup> more serviceable than beef essence. There are several ways of making it. The best which was suggested by the ~~physician~~ <sup>or the</sup> of Liebig, is as follows: Put a pint of cold water on a pound of finely-chopped lean meat. Allow it to stand covered for about two hours near the fire. Then <sup>short</sup> put it on the fire for <sup>or 30</sup> 20 minutes.

~~Then~~ Remove the scum and oily particles, first allowing it to cool. This article of diet is of much use when other food fails. In sickness it is even better to do without opium or quinine than to do without beef tea.

I don't want to disparage the canned huffs;  
but — most prefer very much fresh home-made. ~~Probably of them~~ Beef is the best.



# (Blackboard)

## Comparative Digestibility of Foods.

### Easy of Digestion.

① Beef  
 ② Mutton  
 ③ Lamb  
 ⑤ Chicken  
 ⑥ Turkey  
 ④ Venison  
 Suet - bread  
 Eggs  
 Milk  
 Beef-tea  
 Roasted Oysters  
 Stale Bread  
 Arrow-root  
~~Amor. Asparagus~~  
 Cauliflower  
 Peaches  
 Apples  
 Oranges  
 Sago  
 Tapioca  
~~Starch~~  
 Rice

### Moderately Digestible.

Fresh Fish  
~~Butter~~  
~~Fresh Butter~~  
~~Butter~~  
 Duck  
~~Swiss~~  
 Terrapin  
 Lobster  
 Crab  
~~Not Fresh~~  
 Raw or Steamed Oysters  
 Potatoes  
 Beets  
 Spinach  
 Cabbage  
 Asparagus  
 Turnips  
 Grapes  
 Lettuce  
 Currants  
 Strawberries  
 Raspberries  
 Cooked Fruits  
 Corn starch

### Hard to Digest.

Veal  
 Pork  
 Goose  
 Salt Fish  
~~Butter~~  
 Malted Buttermilk  
 Clams  
~~Roasted~~  
~~Grass~~  
 Fresh Oysters  
~~Baked Corn~~  
~~Wheat~~  
 Cherries  
 Plums  
 Pears  
 Pine-apples  
 Cucumbers  
 Pickles  
 Preserves  
 Cakes  
 Pastry



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hrs.



# Compendium (Essential) Digestibility Of Foods.

## Easy of Digestion

Beef

Mutton

Lamb

Veal

Chicken

Turkey

Roast or Stewed Oysters

Sweet Bread

Beef Tea

Eggs

Milk

State Bread

Arrowroot, Sago,

Tapioca,

Rice

Cauliflower

Pumpkins

Apples

Oranges

## Moderately Digestible

Tenapin

Lobster

Fresh Fish

Crab

Duck

Fresh Butter

Raw or Stewed Oysters

Potatoes

Beets

Spinach

Collards

Hot Yeast Bread

Turnips

Onions

Corn Stalk

Asparagus

Lettered Strawberries

Currents

Raspberries

Strawberries

Ice cream

Butter

## Hard to Digest

Veal

Pork

Salt Fish

Clams

Goose

Melted Butter

Fried oysters

Baked Corn

Cucumbers

Pickles

Dry or Britened Toast

Pears

Pineapples

Cherries

Plums

Preserves

Cakes, Bon-bons,

Pastries, ~~etc.~~

21) ~~etc.~~

21)



Lecture VI.  
Wheat Flour  
Flour

|                           | <u>Flour</u>   | <u>Bran</u> |
|---------------------------|----------------|-------------|
| Water. . . . .            | 14. . . . .    | 40.3        |
| Fat. . . . .              | 1.2 . . . . .  | 2.82        |
| Insoluble Gluten. . . . . | 12.8 . . . . . | 10.84       |
| Soluble Albumen. . . . .  | 1.8 . . . . .  | 1.64        |
| Dextrin & Sugar. . . . .  | 7.2 . . . . .  | 5.8         |
| Starch. . . . .           | 59.7 . . . . . | 22.62       |
| Cellulose. . . . .        | 1.7 . . . . .  | 43.98       |
| Salts. . . . .            | 1.6 . . . . .  | 2.52        |

Times of Digestion.

St. Martin.

|                    |         |                           |          |
|--------------------|---------|---------------------------|----------|
| Rice. . . . .      | 1 hour. | Beef, roasted             | 3 hours. |
| Tripe.             |         | Pork                      |          |
| Eggs whipped.      |         | Mutton                    |          |
| Tapioca.           |         | Oysters                   |          |
| Barley.            |         | Butter                    |          |
| Boiled Milk.       |         | Bread                     |          |
| Lamb.              |         | Veal                      |          |
| Parsnips.          |         | Boiled or Roasted chicken | 4 hrs.   |
| Baked Potatoes     |         | Salt Beef or Pork         | 4½ hrs.  |
| Fricassee Chicken. | 2¾ hrs. |                           |          |



[Don't copy, but  $\frac{1}{2}$  page space]

1871 - Mention about echini in W. Indies -  
& musk-rats in Delaware State

[These items of information, to add to our common stock,  
I am always glad to receive from members of the class.]

### Johnston's Fluid Beef.

with a portion of  
therapeutic uses of salt.

Therapeutic uses of Beef-tea & beef essence:

- in feeble infancy, where milk does not agree;
- after cholera infantum, debility being left;
- in adults, in incipient or advanced phthisis;
- in typhus & typhoid fevers -; delirium tremens;
- in prostrating acute diseases, - after first stage;
- as, diphtheria, - small-pox, -
- scarlet fever, -
- Capillary bronchitis,
- Pneumonia;

in difficulty of digestion from any cause; sometimes  
in such case, if extreme, - injected into the rectum,  
after severe surgical operations as amput. thigh - Ovariotomy

End of 4th Lecture on Alimentation

End of 4th Lecture on Alimentation  
1875.

End of 2nd Lecture  
1872.



BEF-TEA SHOULD  
NOT  
BE STRAINED.

ANOTHER WAY  
OF  
MAKING  
BEF-TEA.

UNWHOLESOME  
CONDITIONS  
OF MEAT.

EPICURES.

MEAT  
IMPROVED  
BY  
KEEPING.

In  
RY.

### SELECT FORMULÆ.

**NUTRITIVE MEAT JELLY.** — Dr. Anstie, in his lectures on diseases of the nervous system, says that when it is necessary to give condensed nutriment in the smallest possible bulk, "nothing equals this jelly:" —

"Lean beef fillet, 3 pounds; lean veal, 3 pounds; lean mutton, 3 pounds; cut up small and put into a saucepan *with no water*; simmer (never boiling) by the side of the fire for eight hours; strain the liquid (from a small quantity of tasteless insoluble fibre that remains) and let it jellify into a soft mass. This is an immensely concentrated meat, minus very little but the water which has been driven off; a teaspoonful or two of it is a wonderful support, and can be taken every hour with ease."

119

(Don't copy)

edit.  
(Anstie) — four ounces (water),  
Coco — Gelatin — Coccolute

ould be can-  
all the good  
d is thus  
will ease-  
stir it up,  
settled.

king beef  
heat.

d are put

on a pound of meat and a pint of water. This answers the purpose very well, but it looks too much like blood, and has a <sup>slightly</sup> unpleasant taste. <sup>Or rather soured & good.</sup>

<sup>Mutton tea — like mutton</sup>  
unwholesome conditions of meat require some notice. If we obey our senses, we will never suffer from bad meat. <sup>warned</sup>

We are always, by <sup>some</sup> ~~Chambers~~ <sup>some</sup> ~~epicures~~ <sup>epicures</sup> prefer meat "a little high". The reason of this may be that their appetites are sated and meat, a little decomposed acts like the pepsin <sup>or old cheese</sup> as a stimulant or peptic adjuvant.

A certain time of <sup>quite short of spoiling</sup> ~~keeping~~ <sup>some kinds of</sup> improves meat. Chickens should be kept 12 hours.



[Don't copy, but transcribe]

120

BO

### WHAT IS CINCHO-QUININE?

THIS question is often asked by physicians who have not been made acquainted with the nature of this important agent, and therefore we republish the following article, which appeared in the JOURNAL in June, 1869, and which presents in a clear and explicit manner its nature and uses:—

The chemical manipulation of the Cinchona or Peruvian barks reveals the presence in them of quite a number of most remarkable, complex bodies. No vegetable production, except the poppy, affords such a marvellous combination of valuable medicinal principles as the *loza* and *calisaya* barks, and no substances have been studied with greater care or

ate]

more stark,  
of the class.

End of 4th Lecture on Alimentation

1875.

with a <sup>portion</sup> of salt.

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- after cholera infantum, debility being left;
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- in prostrating acute diseases, — after first stage;
- as, diphtheria, — small-pox, —
- scarlet fever, —
- Capillary bronchitis,
- Pneumonia;

in difficulty of digestion from any cause; sometimes  
in such case, if extreme, injected into the rectum  
after severe surgical operations as amput. thigh - Ovariotomy

End of 2nd Lecture, 1872.



BEEF-TEA SHOULD NOT BE STRAINED.

ANOTHER WAY OF MAKING BEEF-TEA.

UNWHOLESOME CONDITIONS OF MEAT.

EPICURES.

MEAT IMPROVED BY KEEPING.

In <sup>ful</sup> no is lost. lost. ly por if the

COMPOSITION OF VALENTINE'S PREPARATION OF MEAT-JUICE.—BY WILLIAM H. TAYLOR, STATE ASSAYER, VIRGINIA.

|                                                                             |       |
|-----------------------------------------------------------------------------|-------|
| Water                                                                       | 61.12 |
| Organic substances                                                          | 27.90 |
| Containing uncoagulated albumen                                             | 1.11  |
| Fat                                                                         | .13   |
| Creatin, creatinin, and other organic constituents of flesh-juice and blood | 26.66 |
| Inorganic substances                                                        | 10.98 |
| Containing chloride of sodium                                               | 1.42  |
| Sulphate of potash                                                          | .52   |
| Phosphates of iron, lime, and magnesia                                      | 1.21  |
| Phosphates of potash and soda                                               | 7.83  |

—Virginia Clinical Record.

ed he can- l the good is thus ill ease- tir it up, etted. ing beef

tea without the application of heat. About 15 drops of muriatic acid are put on a pound of meat and a pint of water. This answers the purpose very well, but it looks too much like blood, and has a <sup>slightly</sup> unpleasant taste. <sup>Or rather soured & good.</sup> <sup>Mutton tea — likewise.</sup> <sup>With soured & good.</sup> Unwholesome conditions of meat require some notice. If we obey our senses, we will never suffer from bad meat. We are always <sup>warned</sup> by ~~Chambers~~. Some epicures prefer meat "a little high." The reason of this may be that their appetites are sated and meat, a little decomposed acts like the pepsin <sup>or old cheese</sup> as a stimulant or peptic adjutant. A certain time of <sup>quite short of spoiling</sup> keeping, improves meat. Chickens should be kept 12 hours.



[Don't copy, but transcribe]

# A SUGGESTION FOR THE TREATMENT OF APPROACHING COLLAPSE IN CHOLERA.

BY WILLIAM PEPPER, M.D.,

Lecturer on Clinical Medicine at the University of Pennsylvania.

IT is with no intention of discussing at length the causes, pathology, or treatment of cholera that this brief practical article is penned. The investigations into the precise nature of the cholera-poison cannot yet claim to have attained definite and complete results. Nor can it be asserted that any of the various explanations of its *modus operandi*, however ingenious and plausible, affords full and unquestionable satisfaction.

That which is, however, well known and generally accepted in regard to the mode of action of the cholera-poison is fortunately of material value. Substances have been studied with greater care or

stork,  
y<sup>th</sup> class.

End of 4<sup>th</sup> Lecture on Alimentation

End of 4<sup>th</sup> Lecture on Alimentation  
1875.

with a <sup>portion</sup> of salt.

Therapeutic uses of Beef-tee & beef essence:

- in feeble infancy, when milk does not agree;
- after cholera infantum, debility being left;
- in adults, in incipient or advanced phthisis;
- in typhus & typhoid fevers; delirium tremens;
- in prostrating acute diseases, - after first stage;
- as, diphtheria, - small-pox, -
- scarlet fever, -
- Capillary bronchitis,
- Pneumonia;
- in difficulty of digestion from any cause; sometimes
- in such case, if extreme, injected into the rectum
- after severe surgical operations as amput. thigh - Ovariotomy

End of 2<sup>nd</sup> Lecture, 1872.



BEEF-TEA SHOULD NOT BE STRAINED.

In making beef tea we should be careful not to filter it. If we do, all the good is lost. Whatever is not dissolved is thus lost. We should keep all that will easily pour out. We should even stir it up, if the rich brown material has settled.

ANOTHER WAY OF MAKING BEEF-TEA.

There is another way of making beef tea without the application of heat. About 15 drops of muriatic acid are put on a pound of meat and a pint of water. This answers the purpose very well, but it looks too much like blood, and has a <sup>slightly</sup> unpleasant taste. <sup>Orphic soup & good.</sup> <sup>Mutton tea - life insurance.</sup> <sup>With soup</sup>

UNWHOLESOME CONDITIONS OF MEAT.

<sup>of smell</sup> <sup>of taste</sup> <sup>warmed</sup> <sup>or old cheese</sup> <sup>quite short of spoiling</sup> <sup>some kinds of</sup> ~~Unwholesome~~ conditions of meat require some notice. If we obey our senses, we will never suffer from bad meat. We are always <sup>warned</sup> by ~~Charles Darwin~~. Some epicures prefer meat "a little high". The reason of this may be that their appetites are sated and meat, a little decomposed acts like the pepsin as a stimulant or peptic adjutant.

EPICURES.

MEAT IMPROVED BY KEEPING.

A certain time of <sup>quite short of spoiling</sup> keeping improves meat. Chickens should be kept 12 hours.



\* a peculiar chemical substance found.

~~Partially for certain berries - said to be occasional~~  
 phenomenon; I have never known a case ~~from~~ not some  
 of the facts.

Space of 2 pages  
 for this page

End of 6th Lecture, 1867.



to advantage for in winter  
Mutton ~~should~~ be kept two weeks. Freezing  
also improves meat, tenderizing it by rupturing the cells & fibres.

In Europe several cases of poisoning  
by sausages ~~were~~ <sup>have</sup> known. It was thought  
that the deaths were caused by some an-  
imal in the sausage; but, on investiga-  
tion it was found that the sausage  
was composed of diseased meat, so dis-  
guised, that it could not be known.  
<sup>A peculiar chemical principle called typhindamine was found.</sup>  
<sup>Poisonous cheese has also gone & they make persons ill.</sup>

It is natural to suppose that dis-  
eased meat ~~would~~ <sup>always</sup> be injurious, but  
there are various contradictory accounts.  
Some observers say that it <sup>often</sup> does no harm.  
Others ~~say~~ <sup>times</sup> that it causes febrile irri-  
tation, boils, <sup>Dr. Livingston asserts carbuncles often so caused in South Africa.</sup> eruptions, carbuncles &c.

The flesh is <sup>considered</sup> not injured if the ani-  
mal dies from an accident, <sup>any more than if killed as usual.</sup>

Over-driving cattle injures the meat.  
If the animal dies of an acute dis-  
ease, the flesh is <sup>necessarily much</sup> not injured. If we are  
doubtful as to whether or not we should  
eat their flesh, we should drain their  
blood out, as it is the first part to be  
acted upon by disease.

POISONING  
BY  
BAD MEAT.

CONFLICTING  
ACCOUNTS  
OF  
THE  
UNWHOLESONENESS  
OF  
DISEASED  
MEAT.

EFFECT OF  
ACCIDENT.

OF  
OVER-DRIVING.

OF  
ACUTE DISEASE.



\* In Greenland — seals' blood used

Blood putty sometimes within country  
Dr Eluck of Liverpool reports the use, with great  
benefit, as a medicine as well as a food, of the blood of  
bullocks, calves, sheep & pigs.  $\neq$   
Pacific Medical Journal  $\Lambda$   
1869.

\* Partridges, e.g. — "Pheasants" so called  
(Lethety!) Prairie chickens sent to England, have caused illness.

↓  
Milk - Sickness, in Ohio & W. Virginia

Dr Lethety: — "In some parts of N. America, especially on the  
Alleghany mountains, the flesh of all the cattle is poisonous, and so  
is the milk they yield, and the cheese made from it. (!)"

Very seldom indeed is either the milk or the meat of an animal  
made poisonous by that which did not make the animal ill. — Plants &  
arsenic, dithy



JEWS  
FORBIDDEN  
TO EAT BLOOD

PROBABLE  
THE  
REASON.

EFFECT  
OF  
CHRONIC DISEASE.

OF  
TYPHUS.

FACT OF THE  
ANIMAL'S  
FOOD

PRESERVATION  
OF MEAT

By the Levitical Law, the Jews were com-  
manded to drain the blood of animals  
they ~~ate~~. The reason of this was no doubt,  
that they lived in a tropical climate, where  
blood, being <sup>the most</sup> ~~a very~~ complex <sup>of</sup> substances  
soon decomposes. In cold <sup>climates</sup> there is <sup>usually</sup> ~~no~~ <sup>such</sup>  
need of draining. \*

When the animal has died of a  
wasting, chronic disease, it is decided  
ly unwholesome. Carbuncles are often  
caused in those who eat such meat.

In regard to death by typhus (like  
the Rinderpest) accounts are conflicting.  
Many <sup>have</sup> eaten it without harm.

Meat is <sup>sometimes</sup> ~~often~~ poisoned by the food  
which the animal eats ~~by~~ <sup>by</sup> parasites  
such as the cysticercus, which causes tape  
worm, and trichina; and a parasite in  
sheep which causes distensions. Thorough  
cooking will destroy them. In this country  
there is ~~little~~ <sup>little</sup> danger of trichina, nor does  
tape worm occur as often here as in  
Europe. \*

Besides <sup>the methods</sup> ~~the~~ <sup>various</sup> ~~method~~ of  
There are many ways of preserving



then at low temp.  
Paraffin, at  $300^{\circ}$ , proposed in Edinb.  
 by Drs. Redwood & Mackay — 1866, for making meat  
 fit to keep & cook at any time.

\* The way of killing meat is a question  
 seldom <sup>much</sup> considered. The Jews still bleed  
 the animals to death, I believe. Their Law  
 forbids "things strangled." Knocking on the  
 head ought to be very promptly fatal  
 or else it is not impossible that disturbed  
 innervation in the <sup>the</sup> lingerings of life may alter the  
 blood and flesh juices. Sometimes they are  
 "pithed" or killed by piercing the spinal marrow at the  
 back of the neck, — as the matadors do the bull in Spain.  
 End of 8th Lecture, 1869.

(Allomycin injection process for curing meat.)